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FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, CANCERLIT, BIOTECHDS' ENTERED AT
14:53:09 ON 04 JUN 2003

L1 3099 S 100K OR NUCLEOTID? 9###
L2 109595 S ADENOVIR?
L3 246 S L2 AND L1
L4 82 DUP REM L3 (164 DUPLICATES REMOVED)
L5 2315221 S DELE? OR REMOV?
L6 632978 S DEFICIENT OR LACKING
L7 2890079 S L6 OR L5
L8 16 S L7 AND L4

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L4

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result set*DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*

<u>L4</u>	L3 with l2	22	<u>L4</u>
<u>L3</u>	adenovi\$	22259	<u>L3</u>
<u>L2</u>	100K or nucleotide 9??? or nucleotides 9???	6045	<u>L2</u>
<u>L1</u>	100K or nucleotide 9???	6045	<u>L1</u>

END OF SEARCH HISTORY

L8 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:161478 CAPLUS
 DN 132:204060
 TI **Adenoviruses deleted** in the IVa2, 100K
 and/or preterminal protein sequences
 IN Amalfitano, Andrea; Chen, Yuan Tsong; Hu, Huimin
 PA Duke University, USA
 SO PCT Int. Appl., 156 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000012740	A2	20000309	WO 1999-US19540	19990827
	WO 2000012740	A3	20001123		
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW,			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	CA 2340276	AA	20000309	CA 1999-2340276	19990827
	AU 9956942	A1	20000321	AU 1999-56942	19990827
	EP 1108049	A2	20010620	EP 1999-943952	19990827
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	US 6328958	B1	20011211	US 1999-384749	19990827
	JP 2002528056	T2	20020903	JP 2000-567725	19990827
PRAI	US 1998-145742P	P	19980828		
	WO 1999-US19540	W	19990827		

AB The present invention provides **deleted adenovirus** vectors. The inventive **adenovirus** vectors carry one or more **deletions** in the IVa2, 100K, polymerase and/or preterminal protein sequences of the **adenovirus** genome. In the human **adenovirus** serotype 5 genomes, such **deletions** are at nucleotide positions 4830-5766, 24,990-25,687, and/or 7274-7991. The **adenoviruses** may addnl. contain other **deletions**, mutations or other modifications as well. In particular preferred embodiments, the **adenovirus** genome is multiply **deleted**, i.e., carries 2 or more **deletions** therein. The **deleted adenoviruses** of the invention are "propagation-defective" in that the virus cannot replicate and produce new virions in the absence of complementing function(s). Preferred **adenovirus** vectors of the invention carry a heterologous nucleotide sequence encoding a protein or peptide assocd. with a metabolic disorder, more preferably a protein or peptide assocd. with a lysosomal or glycogen storage disease, most preferably, a lysosomal acid .alpha.-glucosidase. The **deleted adenovirus** vectors advantageously have an increased carrying capacity for heterologous nucleotide sequences, demonstrate lower levels of viral protein expression, induce fewer host immune responses, and/or exhibit increased stability and prolonged transgene expression when introduced into target cells.

L8 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS

AN 2002:946147 CAPLUS

DN 138:34131

TI Helper-virus independent replicating **adenovirus** vectors with
100K or Elb gene **deletion** for gene therapy

IN Amalfitano, Andrea; Hodges, Bradley L.

PA Duke University, USA; Koeberl, Dwight D.

SO PCT Int. Appl., 75 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2002098466	A1	20021212	WO 2002-US17070	20020531
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 2001-295914P	P	20010604		
AB	The present invention provides replicating [100K-] adenovirus vectors that have an impairment in 100K activity. In particular preferred embodiments, the impairment is the result of a deletion in the 100K coding region of the adenovirus vector genome. It is further preferred that the adenovirus produces the El gene products. In an alternate embodiment, the adenovirus produces the Ela gene products, but has an impairment in the Elb coding region, such that replication of the virus is limited to p53- cells. Also described are methods of making and administering the inventive adenovirus vectors to a cell or to a subject. Further provided is use of the inventive [100K-] Ad vectors as a helper virus for the prodn. of vector stocks of adeno-assocd. virus.				

L8 ANSWER 7 OF 16 MEDLINE
 AN 83303837 MEDLINE
 DN 83303837 PubMed ID: 6612996
 TI Analysis of Ad5 hexon and **100K** ts mutants using
 conformation-specific monoclonal antibodies.
 AU Cepko C L; Sharp P A
 NC NIH-P01-CA14051 (NCI)
 P01-CA26717 (NCI)
 SO VIROLOGY, (1983 Aug) 129 (1) 137-54.
 Journal code: 0110674. ISSN: 0042-6822.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 198310
 ED Entered STN: 19900319
 Last Updated on STN: 19970203
 Entered Medline: 19831008
 AB **Adenovirus** type 5 ts mutants **deficient** in hexon
 metabolism were investigated using conformation-specific monoclonal
 antibodies directed against hexon capsomeres and the viral **100K**
 protein. The ts mutants map either in the hexon structural gene or in the
 gene encoding the **100K** protein, a major, late nonstructural
 protein. All of the mutants examined (ts1, ts2, ts3, ts4, ts17, and ts20
 of J. F. Williams, M. Gharpure, S. Ustacelebi, and S. McDonald
 (1971). J. Gen. Virol. 11, 95-101) were unable to produce the
 capsomeric form of hexon (a trimer of three hexon monomers) at the
 nonpermissive temperature. However, all of the mutants retained the
 ability to produce a complex of **100K** and hexon which has been
 demonstrated to play a major role in the assembly of hexon trimers. The
 mutants accumulated nontrimerized hexon in this ts complex in the
 perinuclear region of the cell. Several of the mutants (ts1, ts2, ts3)
 were found to successfully assemble hexon synthesized at the nonpermissive
 temperature upon shift down to the permissive temperature, even in the
 presence of a protein synthesis inhibitor. The mutant, ts2, which maps in
 the hexon structural gene, was found to be dependent on protein synthesis
 for transport of hexon trimers into the nucleus during temperature shift
 down, while the **100K** ts mutants, ts1 and ts3, were independent
 of protein synthesis for both hexon assembly and transport.

L8 ANSWER 1 OF 16 MEDLINE
 AN 2001320301 MEDLINE
 DN 21286721 PubMed ID: 11390592
 TI **Adenovirus** vectors with the **100K** gene **deleted**
 and their potential for multiple gene therapy applications.
 AU Hodges B L; Evans H K; Everett R S; Ding E Y; Serra D; Amalfitano A
 CS Department of Pediatrics, Division of Medical Genetics, Duke University
 Medical Center, Durham, NC 27710, USA.
 NC DK52925 (NIDDK)
 SO JOURNAL OF VIROLOGY, (2001 Jul) 75 (13) 5913-20.
 Journal code: 0113724. ISSN: 0022-538X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 200106
 ED Entered STN: 20010702
 Last Updated on STN: 20010702
 Entered Medline: 20010628
 AB The **100K** protein has a number of critical roles vital for
 successful completion of the late phases of the **adenovirus** (Ad)
 life cycle. We hypothesized that the introduction of **deletions**
 within the **100K** gene would allow for the production of a series
 of new classes of Ad vector, including one that is replication competent
 but blocked in the ability to carry out many late-phase Ad functions.
 Such a vector would have potential for several gene therapy applications,
 based upon its ability to increase the copy number of the transgene
 encoded by the vector (via genome replication) while decreasing the side
 effects associated with Ad late gene expression. To efficiently produce
100K-deleted Ad ([**100K-**]Ad) vectors, an E1-
 and **100K**-complementing cell line (K-16) was successfully
 isolated. Transfection of an [E1-,**100K-**]Ad vector genome into
 the K-16 cells readily yielded high titers of the vector. After infection
 of noncomplementing cells, we demonstrated that [**100K-**]Ad
 vectors have a significantly decreased ability to express several Ad late
 genes. Additionally, if the E1 gene was present in the infected
 noncomplementing cells, [**100K-**]Ad vectors were capable of
 replicating their genomes to high copy number, but were significantly
 blocked in their ability to efficiently encapsidate the replicated
 genomes. Injection of an [E1-,**100K-**]Ad vector in vivo also
 correlated with significantly decreased hepatotoxicity, as well as
 prolonged vector persistence. In summary, the unique properties of [**100K-**]Ad
 vectors suggest that they may have utility in a variety
 of gene therapy applications.

WEST

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L4: Entry 3 of 22

File: USPT

Dec 10, 2002

DOCUMENT-IDENTIFIER: US 6492343 B1

TITLE: Porcine adenovirus type 3 genome

Other Reference Publication (3):

McCoy et al. Nucleotide and Amino Acid Sequence Analysis of the 100K Protein of a Serotype 3 Porcine Adenovirus. DNA Sequence-The Journal of Sequencing and Mapping, vol. 8, pp. 59-61, 1997.*